

Geese and ducks killed by poison and analysis of poaching cases in China

Roller MaMing, Tong Zhang, David Blank, Peng Ding, Xumao Zhao

Xinjiang Institute of Ecology and Geography
Chinese Academy of Sciences
No. 818 Beijing Road, Urumqi
830011, Xinjiang, P. R. of China
maming@ms.xjb.ac.cn

Abstract

Geese and ducks are widely distributed birds in China. They have long migration routes and large overwintering areas along the Yellow and Yangtze rivers. Geese and ducks are a very important food resource for the public, but at the same time, these birds suffer from wide-scale hunting by poachers. More than ten hunting methods are used by poachers. Poisoning is the most dangerous form of poaching, causing the complete destruction of natural resources. We estimate that between 80,000 and 120,000 waterbirds of about 40 species are hunted every year. Geese, ducks and swans account for the greatest numbers. All provinces except Tibet have suffered bird-hunting between 2002 and 2012. Poaching activities are still very common during spring and autumn in China.

Keywords: Geese, ducks, poaching, poison, steel trap, cases, price



Fig. 1. Thousands of wild geese and ducks captured by poison in Aksu, the south of Xinjiang, 28 March 2012 (© MaMing)

Introduction

Many wild animals including birds are still suffering from illegal killing, despite the Chinese Government investing human, material and financial resources in wildlife protection. Poaching, indiscriminate hunting, illegal selling and undocumented transport of waterbirds still occur frequently in many regions of China.

According to our field investigations, literature reviews, consultation with researchers and internet news gathering from all over China, we found that poachers captured large numbers of birds every year, especially geese and ducks. Various methods and tools were used for hunting such as guns, nets, steel traps, electric traps, poison bait, dazzling lamps and so on. These methods are used illegally and frequently along the Yellow and Yangtze rivers. The mainstream media and the public focus on economic growth and improving living standards, so they pay little attention to poaching activities. Large-scale hunting cases take place annually. Wildlife conservation will not succeed as long as the legal framework is insufficient and where the laws are adequate, as long as these are not enforced.

Capture tools and methods

1. Guns

Guns were commonly used by people in China before the 1990s and sport hunting was very popular. Scatterguns, pneumatic guns and shotguns were widely used legally by local people. Large numbers of wild animals and rare birds were killed by hunters. The situation didn't improve until the complete ban on fire arms was enacted by the government in 1996. All civil arms were confiscated by the government and hunting with guns has been well controlled since then.

However, shotguns continued to be used by some special social groups, such as government officials, the police, soldiers and some poachers making a living from hunting. This hunting behavior still exists and it is difficult to completely stop it.

The shooting of wild geese by policemen was recorded in Xinjiang in March 2011. Cases involving soldiers poaching geese on the islands near Shandong Province have also been documented. A special gun, called a 'blunderbus', was also used during hunting around lakes. Tens of firearms were set on a board side by side and over a hundred steel balls could be shot from these firearms at one time. Dozens of passing geese may be hit at once, giving the potential to be very destructive.



Fig. 2. Hunting in Liaoning, March 2012
(© Yizhixiaoniao)

2. Crossbow

Because guns cannot be used by the public, some hunters have resorted to using a crossbow, which is a more damaging weapon than a bow and arrow. The cross-bow has been recently used to shoot geese and ducks. Such events have been reported by newspapers in northeast China many times. Many advanced crossbows can be bought via the internet at present.

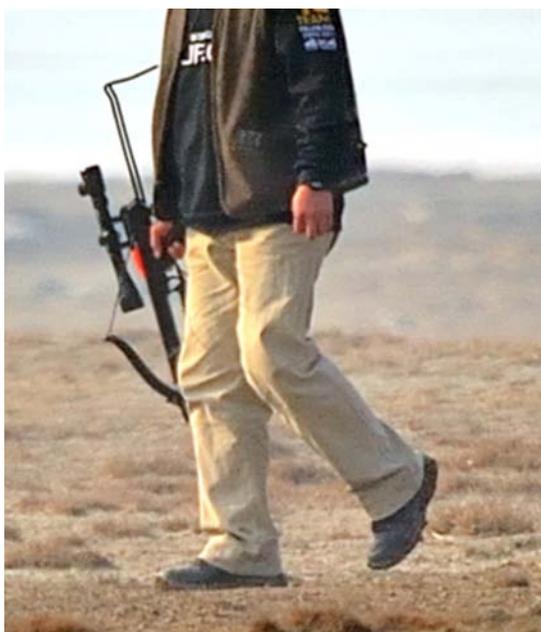


Fig. 3. Cross-bow hunting near Urumqi,
March 2012 (© Honggang Bao)



Fig. 4. Crossbow like it is used for waterbird
hunting (© Honggang Bao)

3. Nets (Wing snare)

Hunters establish wing snares in the air in the form of a large wall of netting. If birds hit the netting wall, they become entangled in the nets and cannot escape. Cylinder traps, also called a “maze net”, are often designed like a maze. If birds fly or swim into the trap, it is difficult for them to escape.

Geese are attracted to trammel nets by playing goose calls as a lure. Hundreds of waterfowl can be captured by hunters every day, especially as nets can be hundreds of metres long. Over 1700 birds were caught by one wing snare trap alone once in Tianjin.

4. Steel trap

During the investigations at the Altun Mountain Nature Reserve, we found that almost every family of herdsmen has a steel trap, which was used for capturing small mammals and large birds. We have found several steel traps around the lake. There was no doubt that they use these traps to capture waders and waterfowl, including cranes, swans, ducks and geese. A similar situation is common in every province of China.

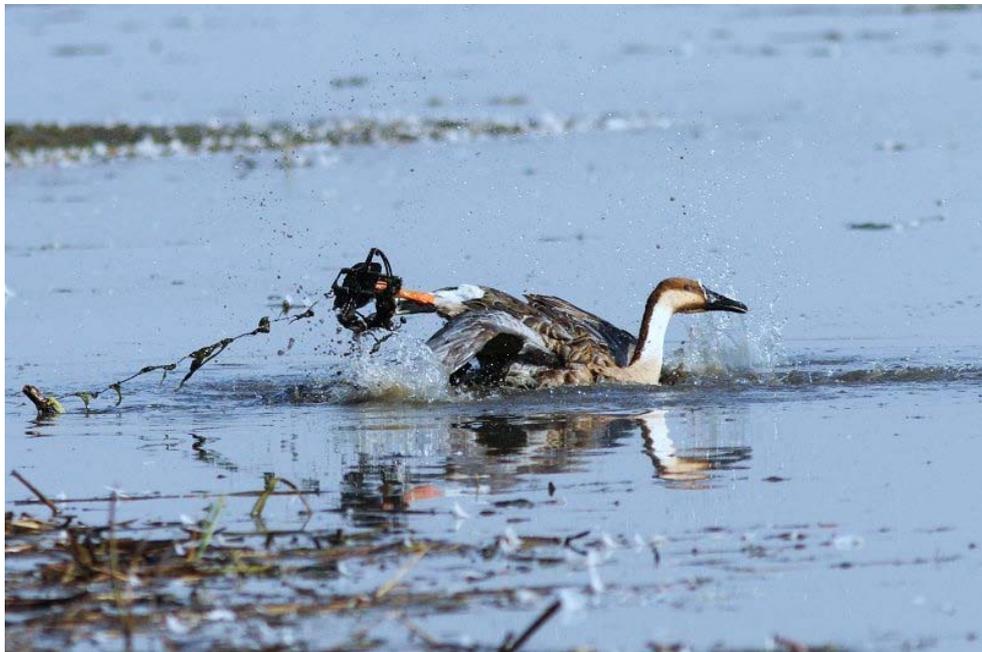


Fig. 5. A Swan Goose *Anser cygnoides* captured in Inner Mongolia, October 2011 (© Hongyu Shan)

5. Electric trap

In addition to traditional tools, poachers are always trying out new hunting methods. In recent years, electric traps have been used frequently in remote areas. Hunters set traps at night and collect prey on the second day. When animals short circuit across the wires, they are electrocuted. Many animal species were caught in this way irrespective of their usefulness as food. When these devices are arranged along the waters edge, most waterfowl are unable to avoid the risk of electrocution.

6. Poison bait

Poisoning is a very dangerous, indiscriminate and highly destructive form of poaching. The most commonly used poison bait is Furadan ($C_{12}H_{15}NO_3$). Poison is mixed with cereal to attract feeding wild birds. Birds lose consciousness after eating the bait, are caught and injected with an antidote. Atropine Sulfate [$(C_{17}H_{23}NO_3)_2 \cdot H_2SO_4$] is the most widely used antidote but numerous dead birds can be found because the antidote injection was not applied in time.



Fig. 6. Dead ducks as a result of poisoning in Aksu, March 2012 (© MaMing)

At stopover sites of migratory wildfowl, tens of thousands of birds were hunted by poachers in this way. In Liaoning, two hundred metres of poison bait was the longest witnessed in March 2012. Dozens of migratory birds were killed every day. Several species of geese were involved, such as Greylag Goose *Anser anser*, Bean Goose *Anser fabalis*, Swan Goose *Anser cygnoides* and White-fronted Goose *Anser albifrons* etc. Some other waterfowl species were also

taken, for example, White Stork *Ciconia ciconia*, Siberian Crane *Grus leucogeranus*, Common Crane *Grus grus*, White-naped Crane *Grus vipio* and almost all species of ducks.

7. Searchlight

Birds confronted with a bright light at night are temporarily dazzled, and will cease their activities. Using searchlights, people catch large numbers of wild geese at night. Such equipment is readily available to anybody in the markets around China.

8. Slip noose

The slip noose is made from iron wire, and also used by fowlers. A cord or rope is formed as a loop with the slipknot, which binds tighter when the cord or rope is pulled. Numerous slip nooses are placed in wetlands and geese are caught when their foot is caught in the trap.

9. Fishing lures

Typically, a metal fishing lure with one or more hooks is usually deployed on the bottom of a lake or sea. These hooks are used mainly for fish, feeding in deep waters. Recently, they have been used for bird-catching as well. Fishing lures are spread out on the bottom of shallow waters, where waterfowl are active. Geese and ducks may step on the hooks and struggling further entangle hooks into their bodies.



Fig. 7. About 600 wild geese and ducks captured by poison in Xinjiang, March 2012 (© MaMing)

10. Other methods

An artillery weapon, 3.8 m long and 7-8 cm in diameter, was developed as an indigenous method to shoot geese in Handan City in December 2011. The weapon can be filled with 350g gunpowder and 450 steel balls, with a range of over a hundred metres, although it was rarely used, this method has the potential to have devastating effects.

In the breeding season, local residents collect bird eggs in wetlands. If they find geese on the nests, they will kill them with long bamboo poles directly.

Large-scale cases of hunting

China is located on major bird migration routes and huge numbers of birds come to winter or pass through every year. Unfortunately, almost all of the waterfowl species are the target of hunting by poachers. According to our investigations, more than forty waterfowl species are regularly caught by hunters (Table 1). More than 150 000 waterfowl birds were caught by illegal poaching every year until 2005. The situation has improved slightly during recent years, but poaching is still very common and popular among local people, soldiers and army officers. According to our estimates, poachers killed at least 200 000 waterbirds in the last three years.

Table 1 Species and number of waterfowl which were hunted by poachers during last three years (Incomplete statistics from 2009 to 2012).

Scientific name	Number	Scientific name	Number
<i>Tachybaptus ruficollis</i>	20	<i>Anas strepera</i>	970
<i>Phalacrocorax carbo</i>	20	<i>Anas penelope</i>	1 150
<i>Casmerodius alba</i>	30	<i>Anas querquedula</i>	90
<i>Egretta eulophotes</i>	1	<i>Anas clypeata</i>	130
<i>Nycticorax nycticorax</i>	6	<i>Netta rufina</i>	3 280
<i>Ardea cinerea</i>	397	<i>Aythya ferina</i>	2 000
<i>Ixobrychus minutus</i>	23	<i>Aythya nyroca</i>	70
<i>Ciconia ciconia</i>	5	<i>Aythya fuligula</i>	3 200
<i>Cygnus cygnus</i>	240	<i>Aix galericulata</i>	18
<i>Cygnus bewickii</i>	360	<i>Mergus squamatus</i>	2
<i>Anser cygnoides</i>	23	<i>Grus grus</i>	160
<i>Anser fabalis</i>	260	<i>Grus nigricollis</i>	3
<i>Anser erythropus</i>	80	<i>Grus vipio</i>	2
<i>Anser albifrons</i>	110	<i>Grus leucogeranus</i>	6
<i>Anser anser</i>	2 240	<i>Grus japonensis</i>	5
<i>Tadorna ferruginea</i>	8 760	<i>Anthropoides virgo</i>	41
<i>Tadorna tadorna</i>	1 320	<i>Otis tarda</i>	30
<i>Anas acuta</i>	16 000	<i>Rullus aquaticus</i>	3
<i>Anas crecca</i>	600	<i>Gallinula chloropus</i>	20
<i>Anas platyrhynchos</i>	14 000	<i>Fulica atra</i>	1 260
<i>Anas poecilorhynchka</i>	170	Waders	18 000

Distribution of poaching cases

Although our statistics are incomplete, hundreds of counties from all provinces of China except Tibet are involved in the illegal hunting of birds (Fig 8). About a hundred hunting cases occurred in the areas of the natural waterfowl habitat, especially along the Yangtze and Yellow rivers. The larger the area of wetlands, the more waterfowl are present and consequently the greater the attraction to the numerous poachers during spring and autumn.

The most active poaching areas are in Liaoning, Xinjiang, Henan, Shandong, Hubei, Hunan and Jiangxi provinces.

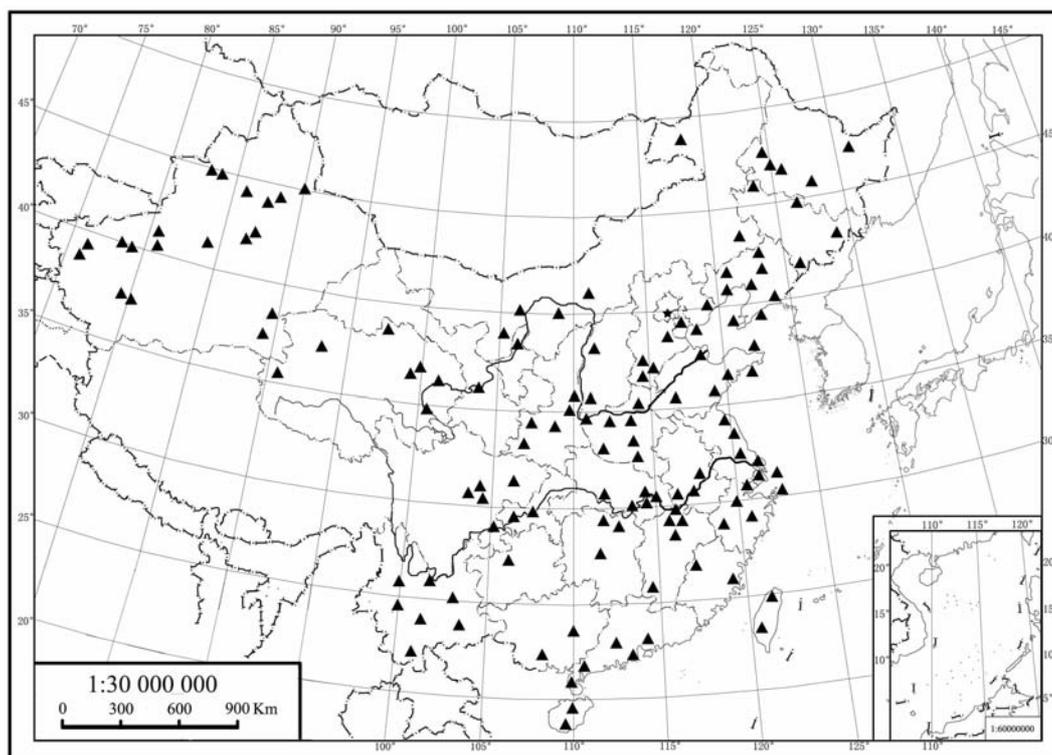


Fig. 8. Distribution of poaching cases in China 2009-2012.

Poison is the poaching method used most often

Poachers may use several methods simultaneously. Among these methods, poison bait is the most widely used by poachers. About 46% of poaching cases and 68% of captive waterfowl involved poisoning. Due to the low cost and easy implementation, poison is the method most frequently used by poachers. Furthermore, poisoning is a public health concern since toxic geese and ducks are dispatched to large cities as a delicacy to restaurants as a food for people. Several villagers nearly died after eating poisoned ducks and geese in Daqing and Shenyang in September and November of 2011. Similar events have occurred in other cities, as well.

The second most common method in poaching is netting. Nearly 35% of poaching used nets, usually two or three sometimes even five kilometres long. Tens of thousands of geese, ducks and swans have been wounded during net catching (www.nddaily.com).

Trophy and sport hunting are forbidden in China. Legally, a few people can have permission to use guns. However, a considerable portion (8%) of registered poaching cases involved the use of guns. Such cases mainly occurred in Xinjiang, Heilongjiang, Liaoning, Jilin, Jiangxi, Jiangsu, Hunan, Hubei and Guizhou provinces.

Other methods, such as steel and electric traps, searchlights and others methods are relatively less used by poachers and accounted for 11% of total poaching cases (www.nddaily.com).

Price in restaurants

Geese and ducks, captured in northern China, are transported to southern cities, such as Guangzhou, Shenzhen, Ningbo, Haikou and Changsha. These areas are the main consumers outlets for the products of poaching. Here we take Urumqi, Changsha and Guangzhou cities as examples. The distances between these cities are about 3 000 - 5 000 km. The price of one duck, which is paid to poachers in the field, is 4–5 US \$ on average. Geese and swans are much more expensive. Waterfowl are generally transported to Guangzhou and Changsha cities by air. The price of air transport is about 1 US \$ per duck (6-8 Yuan/kg for 4 000 km by air, 1 US \$ = 6.3 Yuan). In the markets of Changsha or Guangzhou cities, the price rises to 50 US \$. Commonly, the waterbirds are transported as domestic poultry that are more easy and cheap to dispatch. There are usually 600 - 800 wildbirds per batch. Tens of thousands of wild birds are transported in this way every year.

This is just the initial price before the restaurant processing. When wild birds are placed on the restaurant table, the price will rise several times compared to the initial one. A goose and swan can fetch several hundred Yuan, and up to a thousand Yuan in restaurants in Guangzhou City. Businessmen now purchase wild waterfowl from all over the country every year, and make a large profit.

Discussion

1. Poachers break national laws and regulations. Hunting of large mammals has become more and more difficult, forcing poachers to switch their attention to waterfowl which are widely distributed in wetlands and still occur in large numbers.
2. Consumers have the impression that wild animals taste better and are more healthy than domestic poultry. Some regions even have gastronomic traditions built around wild fauna.
3. Laws and regulations protecting wildlife and natural resources remain incomplete and are often not enforced. Poaching activities often go unpunished and hence the law has little real deterrent effect. Politicians are not willing to strictly enforce the conservation laws. Poachers often have tacit permissions to hunt and keep wildlife species, even being issued with wildlife breeding licences, poultry permits and inspection and quarantine certificates. These procedures all involve the collusion of government departments who issue such documents. So, in some respects, many poaching activities are made to appear legal.
4. In recent years, the modern logistics industry has developed quickly but without regulation. Wild birds can easily be transported under the guise of being poultry especially by railway or air. Most wild geese and ducks are transported to southeastern China. The Chinese transport traffic system provides a more convenient distribution channel for the products of poaching than any form of illegal traffic system.
5. Local people lack awareness about conservation laws. Many poachers even don't know that their activities for hunting of protecting birds are illegal. Three people arrested in Chongqing City in 2008 were unaware that what they were doing was wrong and similar cases have occurred in other places.

In China, agricultural development on the breeding grounds has resulted in wetland destruction and increasing disturbance to waterfowl. Egg collection on wetlands together with habitat loss as a consequence of agriculture has also had a considerable negative impact on Anatidae and led to a decline in the numbers of breeding birds.

Droughts on the breeding grounds also have a negative impact and have contributed to decreasing numbers of birds. However, we contend that waterfowl poaching remains the most serious problem for many wild bird populations throughout much of China.

Acknowledgements

This study was supported by the National Natural Science Foundation of China (30970340, 30470262). Sincere thanks to all who have contributed to this project by providing information and help, as Jun Shi, Haixiang Zhou, Hongyu Shan, Rui Xing, Yahui Huang, Honggang Bao (Mobei), Donghua Xu, Feng Xu, Huang Li, Ying Chen, Weidong Li, Xiang Zhang, Huibin Zhang, Mardan Turhan, Tuson Sawut, Paul Buzzard, Zhaosong Liu and Feng Gao et al

References

- CHENG, T. H. (1979): Fauna Sinica. Aves. Vol. 2: Anseriformes. - Beijing: Science Press.
- MAMING, R & J.J. LU (1997): Wetland and the waterfowl in Xinjiang. - Chinese Biodiversity 5 (Suppl.): 10-14.
- MAMING, R, J. LU, C. TANG, P. SUN & W. HU (1998): The contribution of shorebirds to the catches of hunters in the Shanghai area, China during 1997-1998. - The Stilt 33: 32-36.
- MAMING, R. (2000): Why do Chinese people like to eat waterfowls? - Bulletin of the Hong Kong Bird Watching Society 178: 15-16.
- MAMING, R. & D. CAI (2000): Swans in China. - The Trumpeter Swan Society, Maple Plain, Minnesota, 1-105.
- MAMING, R. (2001): The problems about conservation of wildlife animals in Xinjiang. - Arid Land Geography 24(1): 47-51.
- MOOIJ, J. H. (2009): Estimate of the annual goose harvest rates in the Western Palearctic. - GOOSE BULLETIN 9: 20-23.
- MOOIJ, J. H. (2005): Protection and use of waterbirds in the European Union. - Beiträge zur Jagd- und Wildforschung Bd. 30: 49-76.



A swan with trap in Inner Mongolia, spring 2011 (© Hongyu Shan)



Corn kernels with poison Furadan (C₁₂H₁₅NO₃) in Liaoning (© Haixiang Zhou)



A Bean Goose killed by the poison Furdan ($C_{12}H_{15}NO_3$) in Liaoning Province, March 2012
(© Haixiang Zhou)



Wheat kernels with poison Furdan ($C_{12}H_{15}NO_3$) in Liaoning Province (© Haixiang Zhou)



A swan with steel trap in Liaoning Province, March 2012 (© Haixiang Zhou)



Bean Geese killed by local poachers in Liaoning Province, March 2012 (© Wuyuxing)



Bean Geese killed by the poison Furdan ($C_{12}H_{15}NO_3$) in Liaoning Province, March 2012
(© Haixiang Zhou)



Bean Goose killed by poison in Liaoning Province, March 2012
(© Haixiang Zhou)



The local police driving a speedboat to hunt raptors with guns in wetlands of the south of Xinjiang, March 2012 (© Rui Xing)



Aircraft cargo warehouse and dens of wild geese and ducks near Urumqi, there are about 600 cages and one cage can be loaded with 10 ducks (© MaMing, April 2012)



Special large-scale poaching activities with impunity in the Poyang Lake
(The information from local newspaper and network)

